

ABSTRACT OF THE DISCLOSURE

5 A memory includes: first and second recording layers
for recording information by utilizing a reversible phase
change between a crystalline phase and an amorphous phase
which occurs due to increases in temperature caused by
application of an electric current pulse. The
crystallization temperatures of the first and second
recording layers, T_{x1} and T_{x2} , have the relationship $T_{x1} < T_{x2}$.
10 The crystallization times of the first and second recording
layers, t_{x1} and t_{x2} , have the relationship $t_{x1} > t_{x2}$. $R_{a1}+R_{a2}$,
 $R_{a1}+R_{c2}$, $R_{c1}+R_{a2}$, and $R_{c1}+R_{c2}$ are different from one another
where the resistance value of the first recording layer in
the amorphous phase is R_{a1} , the resistance value of the first
15 recording layer in the crystalline phase is R_{c1} , the
resistance value of the second recording layer in the
amorphous phase is R_{a2} , and the resistance value of the second
recording layer in the crystalline phase is R_{c2} .